

CLAIMS

1. A process for forming an image on a substrate, which comprises coating the substrate with a solution, in an organic solvent, of an amine compound of molybdenum, tungsten or vanadium that changes colour on heating or irradiation, and heating or irradiating the coating.
- 5 2. A process for forming an image on a substrate, which comprises coating the substrate with an aqueous dispersion or suspension, of an amine compound of molybdenum, tungsten or vanadium that changes colour on heating or irradiation, and heating or irradiating the coating.
- 10 3. A process according to claim 1 or claim 2, wherein the amine compound is of molybdenum (VI).
4. A process according to claim 3, wherein the amine is a secondary or tertiary alkylamine in which each alkyl group has up to 12 carbon atoms and the amine has up to 24 carbon atoms.
- 15 5. A process according to any preceding claim, wherein the coating also comprises the use of an organic polymer binder.
6. A process according to any preceding claim, wherein the coating also comprises the use of a colour-former, e.g. a substantially colourless electron-donating dye precursor.
- 20 7. A process according to any preceding claim, wherein the substrate is substantially transparent to visible light.
8. A process according to any preceding claim, wherein the coating is irradiated using a laser.
9. A process according to claim 8, wherein the laser light has a wavelength
- 25 of 800-1500 nm.
10. A process according to claim 8 or claim 9, wherein the coating additionally comprises an IR absorber that absorbs laser radiation.
11. A coated substrate, wherein the coating is a substantially visible light-transparent layer comprising an amine compound as defined in any of claims 1
- 30 to 4.
12. A coated substrate according to claim 11, wherein the coating comprises also an additional component as defined in claim 5 or claim 6.

13. A coated substrate according to claim 11 or claim 12, wherein the substrate is also substantially transparent to visible light.
14. A coated substrate according to any of claims 11 to 13, including also an image formed therein by heating or irradiation.
- 5 15. A coated substrate according to any of claims 11 to 14, wherein the coating additionally comprises an IR absorber that absorbs laser radiation.
16. A solution of an amine compound as defined in any of claims 1 to 4 and of a thermoplastic polymer.
17. A solution of an amine compound as defined in any of claims 1 to 4 and
10 of a photopolymerisable monomer.
18. A solution according to claim 17, which is fluid at or below 150°C .